```
AATTAGATTCCACTAGTACGCCATTGTAGAATCAAGGCCAAGATATGAACAACCCATAAGTAACGGCGATCCTGTCTCAT 80
GTATCCAAAAATAAGAGACACGGCATATTCACTGCTTTGCAGATCTTTCTTCAAATCTCTCCCTCGAGAAGCTACTGGGA 160
TGAATGAGTCTCTTGGCTCAGATTAGATATATTCACTGTATCTGCCGAATAGACTTTGCCTGGTAGCATTAACGTTCCTA 240
TATTCTATTATCAAATCCTTACATTCAATATGGAATATCTTACTGCTGTCGATGGTAGGCAAGACCTGCCACCTACACCA 320
                                  M  E  Y  L  T  A  V  D  G  R  Q  D  L  P  P  T  P
GCTTCGTTTTGTAGTCATGGAGATAGTCCCCTCAATAGCTCTTACGAGCAACTCTTCCATCTCTATGGTCTGGATTCGAG 400
 A  S  F  C  S  H  G  D  S  P  L  N  S  S  Y  E  Q  L  F  H  L  Y  G  L  D  S  S
TCGCATCGAAGCTATCAAACCATGCACACCTTTCCAGCTTGACATGATCGACTGCAATGCTTTGGATAAGCAGTCTGCTA 480
  R  I  E  A  I  K  P  C  T  P  F  Q  L  D  M  I  D  C  N  A  L  D  K  Q  S  A
TCGGCCATGCGGTGTATGATGTCCCAACCGACATTGACATCTCTCGTTTCGCGCTTGCGTGGAAGGAGATCGTCAACCAA 560
I  G  H  A  V  Y  D  V  P  T  D  I  D  I  S  R  F  A  L  A  W  K  E  I  V  N  Q
ACCCCAGCCTTGCGAGCCTTTGCCTTCACCTCGGACTCTGGAAAGACTTCTCAAGTCATCCTAAAAGATAGCTTTGTCTT 640
 T  P  A  L  R  A  F  A  F  T  S  D  S  G  K  T  S  Q  V  I  L  K  D  S  F  V  F
CTCATGGATGTGCTGGTCTTCTTCGAGCTCCCCAGATGAAGTGGTTCGGGATGAAGCTGCCGCTGCTGCATCCGGGCCAC 720
  S  W  M  C  W  S  S  S  S  S  P  D  E  V  V  R  D  E  A  A  A  A  A  S  G  P
GCTGCAACCGCTTCGTTCTACTTGAAGACATGCAGACGAAGAAATGTCAGCTGGTTTGGACCTTCAGTCATGCATTGGTA 800
R  C  N  R  F  V  L  L  E  D  M  Q  T  K  K  C  Q  L  V  W  T  F  S  H  A  L  V
GACGTCACTTTCCAACAACGCGTCCTGAGCCGTGTTTTCGCGGCTTACAAGCATGAGAAGGACACACATCGGCCTGAGAC 880
 D  V  T  F  Q  Q  R  V  L  S  R  V  F  A  A  Y  K  H  E  K  D  T  H  R  P  E  T
ACCCGAGTCATCTGATGCCACTGACACTGACTCTCAGTCAGTCTCCGTGGTGTCCATGAGCTGCGAGGACAATGCCGTAT 960
  P  E  S  S  D  A  T  D  T  D  S  Q  S  V  S  V  V  S  M  S  C  E  D  N  A  V
CGGCGACTCATTTCTGGCAAACTCACCTTAACGATCTCAATGCGTCCGTCTTCCCTCACCTGTCTGACCACCTGATGGTG 1040
S  A  T  H  F  W  Q  T  H  L  N  D  L  N  A  S  V  F  P  H  L  S  D  H  L  M  V
CCCAACCCAACTACAACAGCAGAGCATCGTATCACATTCCCTCTTTCACAGAAAGCACTATCCAATTCTGCCATCTGCCG 1120
 P  N  P  T  T  T  A  E  H  R  I  T  F  P  L  S  Q  K  A  L  S  N  S  A  I  C  R
TACTGCACTCTCAATACTCCTCTCGCGCTACACTCACTCTGACGAGGCCTTGTTTGGTGCGGTAACTGAGCAATCTCTAC 1200
  T  A  L  S  I  L  L  S  R  Y  T  H  S  D  E  A  L  F  G  A  V  T  E  Q  S  L
CATTTGACAAACACTATCTTGCAGATGGTACGTACCAAACAGTTGCACCCCTTCGTGTACACTGCCAATCAAATCTTCGT 1280
P  F  D  K  H  Y  L  A  D  G  T  Y  Q  T  V  A  P  L  R  V  H  C  Q  S  N  L  R
```

Fig. 1A

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GCATCAGATGTCATGGATGCAATCTCTTCTTACGATGATCGCCTTGGTCATCTCGCCCCATTTGGCCTTCGCGACATCCG 1360
 A  S  D  V  M  D  A  I  S  S  Y  D  D  R  L  G  H  L  A  P  F  G  L  R  D  I  R
CAACACTGGTGATAATGGCTCTGCCGCCTGCGATTTCCAAACTGTTTTACTCGTCACCGATGGCAGCCACGTAAACAATG 1440
  N  T  G  D  N  G  S  A  A  C  D  F  Q  T  V  L  L  V  T  D  G  S  H  V  N  N
GTATCAACGGTTTCCTCCAACAGATAACAGAGTCAAGCCATTTCATGCCTTGCAACAACCGTGCCCTCCTTCTGCACTGT 1520
G  I  N  G  F  L  Q  Q  I  T  E  S  S  H  F  M  P  C  N  N  R  A  L  L  L  H  C
CAGATGGAAAGTAGCGGAGCTCTGCTGGTTGCCTACTATGACCACAATGTTATCGATTCGCTTCAGACAACGCGTCTGCT 1600
 Q  M  E  S  S  G  A  L  L  V  A  Y  Y  D  H  N  V  I  D  S  L  Q  T  T  R  L  L
ACAGCAGTTTGGTCATCTGATCAAGTGTTTGCAAAGTCCTCTAGACCTGAGCTCTATGGCTGAGGTCAACTTGATGACTG 1680
  Q  Q  F  G  H  L  I  K  C  L  Q  S  P  L  D  L  S  S  M  A  E  V  N  L  M  T
AGTATGACAGAGCAGAGATTGAGAGTTGGAACTCGCAACCGTTAGAGGTACAGGATACCCTGATCCACCATGAGATGTTG 1760
E  Y  D  R  A  E  I  E  S  W  N  S  Q  P  L  E  V  Q  D  T  L  I  H  H  E  M  L
AAAGCTGTTTCTCATTCCCCCACCAAAACGGCCATCCAAGCGTGGGATGGAGACTGGACCTATTCCGAGCTCGACAATGT 1840
 K  A  V  S  H  S  P  T  K  T  A  I  Q  A  W  D  G  D  W  T  Y  S  E  L  D  N  V
TTCGTCAAGACTCGCTGTCCATATCAAGTCACTTGGCCTTAGAGCTCAGCAAGCCATTATTCCAGTCTACTTTGAGAAGT 1920
  S  S  R  L  A  V  H  I  K  S  L  G  L  R  A  Q  Q  A  I  I  P  V  Y  F  E  K
CGAAATGGGTCATTGCTTCAATGCTGGCTGTTCTCAAGTCTGGTAATGCTTTCACTCTAATTGATCCCAATGATCCACCA 2000
S  K  W  V  I  A  S  M  L  A  V  L  K  S  G  N  A  F  T  L  I  D  P  N  D  P  P
GCTCGAACTGCCCAGGTCGTCACGCAGACTCGGGCGACTGTAGCGCTTACTTCCAAGCTACACCGCGAGACTGTACAGAA 2080
 A  R  T  A  Q  V  V  T  Q  T  R  A  T  V  A  L  T  S  K  L  H  R  E  T  V  Q  K
GCTTGTAGGCCGTTGCGTTGTGGTTGATGACGAGCTTCTGCAATCAGTTTCTGCCAGCGACGATTTCTCAAGTCTGACCA 2160
  L  V  G  R  C  V  V  V  D  D  E  L  L  Q  S  V  S  A  S  D  D  F  S  S  L  T
AATCGCAAGACTTGGCCTACGTGATCTTCACTTCTGGTAGCACGGGCGACCCGAAAGGCATCATGATTGAACACCGAGCG 2240
K  S  Q  D  L  A  Y  V  I  F  T  S  G  S  T  G  D  P  K  G  I  M  I  E  H  R  A
TTCTCATCATGTGCACTCAAGTTCGGCGCGTCTCTTGGCATCAACTCTGATACTCGTGCCCTACAATTTGGAACCCATGC 2320
 F  S  S  C  A  L  K  F  G  A  S  L  G  I  N  S  D  T  R  A  L  Q  F  G  T  H  A
CTTTGGCGCATGTCTTCTCGAGATTATGACTACTCTCATCAACGGTGGCTGCGTTTGTATTCCCTCCGACGATGATCGTA 2400
  F  G  A  C  L  L  E  I  M  T  T  L  I  N  G  G  C  V  C  I  P  S  D  D  D  R
TGAACAGTATCCCGTCCTTCATCAACCGATACAACGTTAATTGGATGATGGCGACACCTTCGTACATGGGAACCTTTTCA 2480
M  N  S  I  P  S  F  I  N  R  Y  N  V  N  W  M  M  A  T  P  S  Y  M  G  T  F  S
```

Fig. 1B

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CCTGAAGACGTTCCTGGCCTTGCGACATTGGTACTTGTTGGGGAGCAGATGTCATCTTCAGTCAACGCAATCTGGGCCCC 2560
 P  E  D  V  P  G  L  A  T  L  V  L  V  G  E  Q  M  S  S  S  V  N  A  I  W  A  P
CAAGCTCCAACTCTTGAACGGGTACGGACAGAGTGAAAGTTCCTCAATTTGTTTTGCCTCCAATATGTCAACTGAGCCCA 2640
  K  L  Q  L  L  N  G  Y  G  Q  S  E  S  S  S  I  C  F  A  S  N  M  S  T  E  P
ACAACATGGGCAGAGCAGTCGGAGCTCATTCATGGGTCATTGACCCGAACGATATAAACCGACTAGTTCCGATTGGAGCT 2720
N  N  M  G  R  A  V  G  A  H  S  W  V  I  D  P  N  D  I  N  R  L  V  P  I  G  A
GTGGGAGAACTGGTCATTGAGAGTCCAGGCATTGCCCGCGACTACATTGTTCCCCCCCCTCCGGAGAAGTCCCCATTCTT 2800
 V  G  E  L  V  I  E  S  P  G  I  A  R  D  Y  I  V  P  P  P  P  E  K  S  P  F  F
CACAGACATTCCAAGCTGGTATCCAGCGAACACGTTTCCTGATGGGGCAAAACTCTACAGGACAGGAGATCTTGCAAGAT 2880
  T  D  I  P  S  W  Y  P  A  N  T  F  P  D  G  A  K  L  Y  R  T  G  D  L  A  R
ATGCCTCCGATGGGTCCATCGTTTGCCTTGGGCGCATAGACTCGCAGGTCAAGATCCGGGGACAGCGTGTTGAGCTGGGT 2960
Y  A  S  D  G  S  I  V  C  L  G  R  I  D  S  Q  V  K  I  R  G  Q  R  V  E  L  G
GCCATTGAGACCCATCTCCGACAGCAGATGCCAGACGACTTGACTATTGTGGTAGAAGCTACCAAGCGATCCCAATCTGC 3040
 A  I  E  T  H  L  R  Q  Q  M  P  D  D  L  T  I  V  V  E  A  T  K  R  S  Q  S  A
CAACAGCACATCCTTAATTGCATTCCTAATAGGGTCTTCTTACTTCGGAAATAGACCCTCGGATGCCCACATTCTGGACC 3120
  N  S  T  S  L  I  A  F  L  I  G  S  S  Y  F  G  N  R  P  S  D  A  H  I  L  D
ATGATGCTACCAAAGCTATCAACATAAAGCTGGAGCAGGTATTGCCTCGACACTCTATCCCCTCATTCTACATCTGCATG 3200
H  D  A  T  K  A  I  N  I  K  L  E  Q  V  L  P  R  H  S  I  P  S  F  Y  I  C  M
CTGGAGCTTCCACGTACTGCCACCGGGAAGATAGATAGGAGGCGACTACGAATCATGGGCAAAGACATCTTGGACAAGCA 3280
 L  E  L  P  R  T  A  T  G  K  I  D  R  R  R  L  R  I  M  G  K  D  I  L  D  K  Q
GACCCAAGGGGCCATTGTTCAACAAGCACCCGCTCCTATCCCTGTTTTCGCAGACACAGCAGCAAAGCTCCACAGTATCT 3360
  T  Q  G  A  I  V  Q  Q  A  P  A  P  I  P  V  F  A  D  T  A  A  K  L  H  S  I
GGGTACAGAGTTTGGGTATCGATCCAGCCACGGTCAATGTTGGGGCAACTTTCTTCGAACTCGGAGGAAACTCTATCACT 3440
W  V  Q  S  L  G  I  D  P  A  T  V  N  V  G  A  T  F  F  E  L  G  G  N  S  I  T
GCTATCAAGATGGTGAACATGGCGAGGTCCGTTGGTATGGACCTCAAGGTCTCTAACATCTACCAGCACCCGACGCTTGC 3520
 A  I  K  M  V  N  M  A  R  S  V  G  M  D  L  K  V  S  N  I  Y  Q  H  P  T  L  A
GGGAATTTCCGCGGTCGTCAAGGGTGATCCTCTGTCCTACACTCTCATCCCCAAGTCAACTCATGAGGGACCTGTTGAGC 3600
  G  I  S  A  V  V  K  G  D  P  L  S  Y  T  L  I  P  K  S  T  H  E  G  P  V  E
AGTCTTATTCACAAGGCCGACTATGGTTCCTGGATCAGTTGGACGTTGGCAGTCTGTGGTATCTGATTCCATATGCTGTG 3680
Q  S  Y  S  Q  G  R  L  W  F  L  D  Q  L  D  V  G  S  L  W  Y  L  I  P  Y  A  V
```

Fig. 1C

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AGAATGCGCGGGCCTGTCAATGTCGACGCGTTACGTCGGGCTCTTGCAGCGCTTGAACAGCGACACGAGACTCTTAGAAC 3760
 R  M  R  G  P  V  N  V  D  A  L  R  R  A  L  A  A  L  E  Q  R  H  E  T  L  R  T
GACATTTGAAGACCAGGATGGTGTCGGTGTACAAATTGTTCACGAGAAGCTTTCTGAGGAGATGAAGGTCATTGATCTCT 3840
  T  F  E  D  Q  D  G  V  G  V  Q  I  V  H  E  K  L  S  E  E  M  K  V  I  D  L
GTGGTTCAGACCTTGACCCGTTTGAGGTGTTGAACCAAGAACAGACTACTCCCTTCAATCTCTCATCTGAAGCTGGCTGG 3920
C  G  S  D  L  D  P  F  E  V  L  N  Q  E  Q  T  T  P  F  N  L  S  S  E  A  G  W
AGAGCGACGCTCTTACGACTTGGTGAAGATGACCACATCCTCACTATTGTCATGCATCACATCATCTCAGATGGTTGGTC 4000
 R  A  T  L  L  R  L  G  E  D  D  H  I  L  T  I  V  M  H  H  I  I  S  D  G  W  S
AATTGATGTCTTGCGACGCGATCTCAATCAGCTCTACTCAGCTGCGCTCAAGGACTCAAAAGACCCGCTGTCAGCACTCA 4080
  I  D  V  L  R  R  D  L  N  Q  L  Y  S  A  A  L  K  D  S  K  D  P  L  S  A  L
CTCCTCTACCTATCCAGTACAGCGACTTTGCAAAATGGCAGAAGGACCAATTCATAGAGCAGGAGAAGCAACTCAACTAC 4160
T  P  L  P  I  Q  Y  S  D  F  A  K  W  Q  K  D  Q  F  I  E  Q  E  K  Q  L  N  Y
TGGAAGAAGCAACTCAAAGACTCTTCCCCAGCAAAGATCCCGACCGACTTTGCCCGCCCTGCACTTCTGTCTGGAGACGC 4240
 W  K  K  Q  L  K  D  S  S  P  A  K  I  P  T  D  F  A  R  P  A  L  L  S  G  D  A
AGGTTGCGTACATGTTACCATCGACGGCGAGCTCTACCAGTCCCTTCGAGCCTTCTGCAACGAACACAACACGACCTCTT 4320
  G  C  V  H  V  T  I  D  G  E  L  Y  Q  S  L  R  A  F  C  N  E  H  N  T  T  S
TCGTCGTTCTTCTAGCTGCGTTCCGTGCCGCTCATTATCGTCTCACAGCTGTTGAAGACGCTGTCATTGGTACACCAATT 4400
F  V  V  L  L  A  A  F  R  A  A  H  Y  R  L  T  A  V  E  D  A  V  I  G  T  P  I
GCGAATCGCAACCGACCTGAACTGGAGGATATCATCGGCTGCTTTGTCAATACGCAGTGTATGCGAATCAACATAGATCA 4480
 A  N  R  N  R  P  E  L  E  D  I  I  G  C  F  V  N  T  Q  C  M  R  I  N  I  D  H
TCACGATACCTTTGGGACTTTGATCAACCAAGTCAAGGCTACGACGACAGCAGCATTCGAGAACGAGGATATTCCGTTTG 4560
  H  D  T  F  G  T  L  I  N  Q  V  K  A  T  T  T  A  A  F  E  N  E  D  I  P  F
AGCGCGTTGTATCAGCACTACAGCCTGGATCCAGAGATCTGTCAAGCACACCTCTCGCACAACTCATTTTTGCAGTGCAC 4640
E  R  V  V  S  A  L  Q  P  G  S  R  D  L  S  S  T  P  L  A  Q  L  I  F  A  V  H
TCACAGAAGGACCTTGGAAGATTCAAGTTCCAGGGTCTCGAGTCCGTACCTGTGCCTAGCAAAGCGTACACTCGATTTGA 4720
 S  Q  K  D  L  G  R  F  K  F  Q  G  L  E  S  V  P  V  P  S  K  A  Y  T  R  F  D
CATGGAGTTCCATCTGTTTCAAGAAACCGACAGCCTTAAAGGTAGCGTCAACTTTGCCGATGAGCTGTTCAAAATGGAGA 4800
  M  E  F  H  L  F  Q  E  T  D  S  L  K  G  S  V  N  F  A  D  E  L  F  K  M  E
```

Fig. 1D

```
CTGTTGAAAATGTCGTCAGAGTATTCTTTGAGATTCTGAGAAACGGGCTTCAAAGTTCGCGGACACCAGTCTCAATACTT 4880
T  V  E  N  V  V  R  V  F  F  E  I  L  R  N  G  L  Q  S  S  R  T  P  V  S  I  L
CCTTTGACTGATGGCATTGTGACTCTTGAAAAATTGGATGTTCTCAACGTCAAACATGTCGACTATCCCCGAGAATCGAG 4960
 P  L  T  D  G  I  V  T  L  E  K  L  D  V  L  N  V  K  H  V  D  Y  P  R  E  S  S
CTTGGCTGATGTCTTCCAGACCCAAGTCTCTGCTTACCCCGATAGTCTGGCTGTGGTGGACTCCTCGTGCCGATTGACCT 5040
  L  A  D  V  F  Q  T  Q  V  S  A  Y  P  D  S  L  A  V  V  D  S  S  C  R  L  T
ACACCGAGTTGGATCGCCAGTCTGATATTCTCGCTGGATGGCTTCGTCGACGGTCAATGCCTGCAGAGACGCTTGTCGCA 5120
Y  T  E  L  D  R  Q  S  D  I  L  A  G  W  L  R  R  R  S  M  P  A  E  T  L  V  A
GTATTTGCCCCACGGTCATGTGAGACAATTGTCGCGTTCTTTGGTGTGTTGAAGGCGAACTTGGCCTATCTTCCTCTCGA 5200
 V  F  A  P  R  S  C  E  T  I  V  A  F  F  G  V  L  K  A  N  L  A  Y  L  P  L  D
TGTACGATCGCCCTCGGCGAGAGTTCAGGATATACTTTCTGGACTTTCTGGGCCTACCATTGTTTTGATTGGCCATGATA 5280
  V  R  S  P  S  A  R  V  Q  D  I  L  S  G  L  S  G  P  T  I  V  L  I  G  H  D
CAGCGCCTCCCGATATCGAGGTTACTAACGTCGAGTTTGTTCGTATCCGGGATGCGCTGAATGACAGCAATGCAGATGGC 5360
T  A  P  P  D  I  E  V  T  N  V  E  F  V  R  I  R  D  A  L  N  D  S  N  A  D  G
TTTGAAGTCATCGAGCACGACAGCACAAAGCCCTCAGCCACGAGTCTCGCATACGTGCTGTATACCTCAGGATCCACTGG 5440
 F  E  V  I  E  H  D  S  T  K  P  S  A  T  S  L  A  Y  V  L  Y  T  S  G  S  T  G
CCGACCAAAAGGCGTCATGATTGAGCACCGTGTCATTATTCGAACAGTCACAAGTGGCTGTATACCCAACTATCCTTCGG 5520
  R  P  K  G  V  M  I  E  H  R  V  I  I  R  T  V  T  S  G  C  I  P  N  Y  P  S
AAACGAGGATGGCTCACATGGCGACCATTGCGTTTGACGGCGCATCGTACGAGATCTACAGCGCCCTTTTGTTCGGAAGG 5600
E  T  R  M  A  H  M  A  T  I  A  F  D  G  A  S  Y  E  I  Y  S  A  L  L  F  G  R
ACACTTGTTTGCGTTGACTACATGACAACCCTCGACGCTAGAGCACTCAAGGATGTGTTTTTCCGAGAGCATGTCAACGC 5680
 T  L  V  C  V  D  Y  M  T  T  L  D  A  R  A  L  K  D  V  F  F  R  E  H  V  N  A
GGCAAGTCATGTCACCAGCTCTTCTCAAGATGTACCTCTCCGAGTCCCGAGAAGGCTCTCGAGAACCTTGATGTTCTTCT 5760
  A  S  H  V  T  S  S  S  Q  D  V  P  L  R  V  P  R  R  L  S  R  T  L  M  F  F
TCTTGGTGGTGACAGATTCGACGGCCCCAGATGCTCTCGATGCGCAGGGACTTTATCAAGGGGTCCAGTGTTACAATGGT 5840
F  L  V  V  T  D  S  T  A  P  D  A  L  D  A  Q  G  L  Y  Q  G  V  Q  C  Y  N  G
TACGGCCCAACAGAGAATGGAGTCATGAGTACAATCTATCCCATTGACTCGACTGAGTCGTTCATCAATGGAGTCCCAAT 5920
 Y  G  P  T  E  N  G  V  M  S  T  I  Y  P  I  D  S  T  E  S  F  I  N  G  V  P  I
```

Fig. 1E

```
TGGACGAGCTCTGAACAACTCAGGAGCGTATGTCGTGGATCCTGAGCAACAGCTTGTTGGCATTGGTGTGATGGGAGAGC 6000
  G  R  A  L  N  N  S  G  A  Y  V  V  D  P  E  Q  Q  L  V  G  I  G  V  M  G  E
TTGTTGTCACTGGCGATGGTCTTGCGCGGGGCTACAGTGACAAAGCCCTTGACGAGAACCGTTTTGTGCACATTACTGTC 6080
L  V  V  T  G  D  G  L  A  R  G  Y  S  D  K  A  L  D  E  N  R  F  V  H  I  T  V
AATGACCAGACAGTGAAGGCGTATCGCACTGGCGATCGAGTGCGGTACAGGATTGGAGATGGCCTCATCGAGTTCTTCGG 6160
  N  D  Q  T  V  K  A  Y  R  T  G  D  R  V  R  Y  R  I  G  D  G  L  I  E  F  F  G
ACGTATGGACACCCAGTTCAAGATTCGTGGCAATCGTATCGAATCAGCTGAGATTGAAGCGGCCCTTCTGCGCGACTCCT 6240
  R  M  D  T  Q  F  K  I  R  G  N  R  I  E  S  A  E  I  E  A  A  L  L  R  D  S
CCGTCCGAGATGCTGCTGTCGTCCTTCAGCAGAATGAGGATCAAGCGCCTGAGATCTTGGGGTTTGTTGTTGCTGATCAT 6320
S  V  R  D  A  A  V  V  L  Q  Q  N  E  D  Q  A  P  E  I  L  G  F  V  V  A  D  H
GATCATTCTGAGAATGACAAGGGACAATCTGCCAATCAAGTCGAAGGATGGCAAGACCATTTCGAGAGTGGCATGTATTC 6400
 D  H  S  E  N  D  K  G  Q  S  A  N  Q  V  E  G  W  Q  D  H  F  E  S  G  M  Y  S
CGACATTGGCGAAATTGACCCGTCGACGATTGGTAGCGACTTCAAGGGTTGGACATCAATGTATGATGGAAGTCAAATCG 6480
  D  I  G  E  I  D  P  S  T  I  G  S  D  F  K  G  W  T  S  M  Y  D  G  S  Q  I
ACTTCGATGAGATGCACGAGTGGCTTGGTGAGACTACCCGGACACTCCATGACAATCGCTCTCTAGGCAATGTCCTTGAA 6560
D  F  D  E  M  H  E  W  L  G  E  T  T  R  T  L  H  D  N  R  S  L  G  N  V  L  E
ATTGGAACAGGTAGCGGCATGATCCTCTTCAACCTTGACAGCAGGCTTGAGAGTTACGTTGGTCTTGAACCATCCAGATC 6640
 I  G  T  G  S  G  M  I  L  F  N  L  D  S  R  L  E  S  Y  V  G  L  E  P  S  R  S
AGCAGCTGCATTTGTCAACAAAGCTACCGAGTCTATACCATCGCTTGCTGGAAAAGCCAAGGTTCAGGTTGGAACAGCTA 6720
  A  A  A  F  V  N  K  A  T  E  S  I  P  S  L  A  G  K  A  K  V  Q  V  G  T  A
CAGATATTGGTCAAGTCGATGACTTACACCCTGACCTCGTGGTTCTCAACTCAGTCATTCAGTATTTCCCGTCTTCGGAG 6800
T  D  I  G  Q  V  D  D  L  H  P  D  L  V  V  L  N  S  V  I  Q  Y  F  P  S  S  E
TACCTTGCAGAAATCGCAGACACCTTGATTCATCTGCCTAACGTGCAGCGGATTTTCTTTGGCGATGTCCGATCGCAGGC 6880
 Y  L  A  E  I  A  D  T  L  I  H  L  P  N  V  Q  R  I  F  F  G  D  V  R  S  Q  A
CACCAACGAGCACTTCCTTGCTGCCAGGGCTATCCACACACTGGGGAAGAATGCAACGAAGGACGATGTTCGACAGAAAA 6960
  T  N  E  H  F  L  A  A  R  A  I  H  T  L  G  K  N  A  T  K  D  D  V  R  Q  K
TGGCAGAATTGGAGGACATGGAGGAGGAGTTGCTTGTTGAACCTGCTTTCTTCACCTCGTTGAAAGACAGGTTTCCAGGT 7040
M  A  E  L  E  D  M  E  E  E  L  L  V  E  P  A  F  F  T  S  L  K  D  R  F  P  G
CTGGTGGAACATGTTGAGATCCTGCCAAAGAACATGGAAGCTGTGAATGAGCTCAGTGCGTATCGATATGCCGCTGTTGT 7120
 L  V  E  H  V  E  I  L  P  K  N  M  E  A  V  N  E  L  S  A  Y  R  Y  A  A  V  V
```

Fig. 1F

```
GCACGTTCGGGGTTCACTTGGAGATGAGCTTGTGCTTCCGGTTGAGAAAGATGACTGGATCGACTTTCAAGCGAATCAAT 7200
  H  V  R  G  S  L  G  D  E  L  V  L  P  V  E  K  D  D  W  I  D  F  Q  A  N  Q
TGAACCAGAAGTCACTGGGTGACCTTCTCAAGTCTTCAGATGCTGCTATCATGGCAGTCAGCAAAATTCCTTTCGAAATC 7280
L  N  Q  K  S  L  G  D  L  L  K  S  S  D  A  A  I  M  A  V  S  K  I  P  F  E  I
ACGGCCTTTGAAAGACAGGTCGTCGCTTCCCTCAATAGCAACATCGATGAGTGGCAGCTATCAACCATTCGGTCCAGCGC 7360
 T  A  F  E  R  Q  V  V  A  S  L  N  S  N  I  D  E  W  Q  L  S  T  I  R  S  S  A
CGAGGGCGACTCATCACTATCCGTTCCCGACATCTTTCGCATTGCTGGGGAAGCCGGGTTCCGTGTCGAGGTCAGTTCTG 7440
  E  G  D  S  S  L  S  V  P  D  I  F  R  I  A  G  E  A  G  F  R  V  E  V  S  S
CACGACAGTGGTCTCAGAATGGTGCATTGGACGCTGTTTTCCATCATTGTTGCTCCCAAGGGCGTACTCTGGTCAACTTT 7520
A  R  Q  W  S  Q  N  G  A  L  D  A  V  F  H  H  C  C  S  Q  G  R  T  L  V  N  F
CCTACGGACCATCACCTTCGAGGGTCTGATCTCCTCACCAATCGACCCCTTCAGCGACTGCAAAACCGTCGTATCGCCAT 7600
 P  T  D  H  H  L  R  G  S  D  L  L  T  N  R  P  L  Q  R  L  Q  N  R  R  I  A  I
CGAAGTCCGCGAGAGGCTTCGGTCCTTACTTCCATCGTACATGATCCCATCGAACATCGTTGTTCTGGACAAGATGCCTC 7680
  E  V  R  E  R  L  R  S  L  L  P  S  Y  M  I  P  S  N  I  V  V  L  D  K  M  P
TCAACGCCAATGGTAAAGTTGACCGGAAGGAACTCTCTCGCAGGGCAAAGGTTGTACCGAAGCAGCAGACAGCAGCGCCG 7760
L  N  A  N  G  K  V  D  R  K  E  L  S  R  R  A  K  V  V  P  K  Q  Q  T  A  A  P
TTACCGACATTTCCCATCAGTGAGGTCGAAGTCATTCTTTGCGAAGAAGCCACTGAGGTGTTTGGCATGAAGGTTGACAT 7840
 L  P  T  F  P  I  S  E  V  E  V  I  L  C  E  E  A  T  E  V  F  G  M  K  V  D  I
TACCGATCACTTCTTCAATCTCGGTGGACACTCTCTCTTGGCCACGAAGCTCATTTCTCGTATCGACCAACGACTCAAGG 7920
  T  D  H  F  F  N  L  G  G  H  S  L  L  A  T  K  L  I  S  R  I  D  Q  R  L  K
TCCGTATCACTGTCAAGGATGTCTTTGACCATCCTGTATTTGCGGATCTAGCATCTGTCATCCGTCAAGGGCTGGGTTTG 8000
V  R  I  T  V  K  D  V  F  D  H  P  V  F  A  D  L  A  S  V  I  R  Q  G  L  G  L
CAACAACCCGTTTCTGATGGTCAGGGACAAGACAGATCTGCCCACATGGCACCCCGTACCGAGACTGAAGCTATACTCTG 8080
 Q  Q  P  V  S  D  G  Q  G  Q  D  R  S  A  H  M  A  P  R  T  E  T  E  A  I  L  C
TGATGAGTTTGCAAAGGTTCTGGGGTTCCAAGTCGGGATTACAGACAATTTCTTTGATCTTGGTGGTCATTCACTCATGG 8160
  D  E  F  A  K  V  L  G  F  Q  V  G  I  T  D  N  F  F  D  L  G  G  H  S  L  M
CTACTAAACTCGCTGTGCGCATCGGACATCGACTTGACACGACTGTTTCGGTGAAGGATGTTTTCGATCATCCTGTACTC 8240
A  T  K  L  A  V  R  I  G  H  R  L  D  T  T  V  S  V  K  D  V  F  D  H  P  V  L
TTCCAACTTGCAATTGCATTGGATAACTTGGTTCAATCCAAGACCAATGAGATAGTTGGAGGTAGAGAAATGGCTGAATA 8320
 F  Q  L  A  I  A  L  D  N  L  V  Q  S  K  T  N  E  I  V  G  G  R  E  M  A  E  Y
```

Fig. 1G

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CTCACCTTTCCAACTCCTCTTTACAGAAGACCCAGAGGAGTTTATGGCGAGCGAGATCAAGCCACAACTTGAGTTACAGG 8400
  S  P  F  Q  L  L  F  T  E  D  P  E  E  F  M  A  S  E  I  K  P  Q  L  E  L  Q
AAATCATTCAAGACATATATCCGTCTACCCAGATGCAGAAGGCTTTCCTCTTCGATCACACAACTGCGCGCCCGAGACCT 8480
E  I  I  Q  D  I  Y  P  S  T  Q  M  Q  K  A  F  L  F  D  H  T  T  A  R  P  R  P
TTCGTGCCGTTCTACATCGACTTCCCCAGCACTTCCGAGCCTGATGCTGCAGGTCTAATCAAGGCTTGCGAGTCTCTGGT 8560
 F  V  P  F  Y  I  D  F  P  S  T  S  E  P  D  A  A  G  L  I  K  A  C  E  S  L  V
AAATCATCTTGACATCTTCAGAACAGTCTTTGCAGAGGCATCTGGAGAACTATACCAAGTGGTCTTGTCCTGTCTTGATC 8640
  N  H  L  D  I  F  R  T  V  F  A  E  A  S  G  E  L  Y  Q  V  V  L  S  C  L  D
TGCCAATCCAAGTGATTGAGACAGAAGACAACATCAATACGGCGACAAATGAGTTTCTCGATGAGTTTGCGAAAGAGCCA 8720
L  P  I  Q  V  I  E  T  E  D  N  I  N  T  A  T  N  E  F  L  D  E  F  A  K  E  P
GTTCGTCTGGGACATCCGTTGATTCGTTTTACAATCATCAAACAAACCAAGTCGATGCGTGTGATAATGAGAATATCGCA 8800
 V  R  L  G  H  P  L  I  R  F  T  I  I  K  Q  T  K  S  M  R  V  I  M  R  I  S  H
TGCCCTGTATGATGGTCTGAGTCTAGAGCATGTCGTGCGCAAACTTCACATGCTCTACAACGGGAGATCACTTTTGCCAC 8880
  A  L  Y  D  G  L  S  L  E  H  V  V  R  K  L  H  M  L  Y  N  G  R  S  L  L  P
CACACCAATTCTCGCGGTACATGCAGTATACTGCTGACGGTCGCGAAAGTGGACATGGATTTTGGCGCGATGTGATTCAA 8960
P  H  Q  F  S  R  Y  M  Q  Y  T  A  D  G  R  E  S  G  H  G  F  W  R  D  V  I  Q
AATACGCCCATGACAATATTGAGTGATGACACGGTTGTTGATGGAAATGATGCAACCTGCAAGGCGTTGCACCTATCAAA 9040
 N  T  P  M  T  I  L  S  D  D  T  V  V  D  G  N  D  A  T  C  K  A  L  H  L  S  K
GATTGTCAATATTCCTTCACAGGTACTTCGAGGCAGCAGTAACATCATTACTCAAGCTACTGTGTTTAACGCAGCCTGCG 9120
  I  V  N  I  P  S  Q  V  L  R  G  S  S  N  I  I  T  Q  A  T  V  F  N  A  A  C
CGTTAGTCTTGTCACGGGAATCTGACTCGAAAGACGTTGTCTTTGGACGCATCGTCTCTGGTCGTCAAGGCTTGCCTGTT 9200
A  L  V  L  S  R  E  S  D  S  K  D  V  V  F  G  R  I  V  S  G  R  Q  G  L  P  V
GAATACCAGGACATTGTCGGGCCTTGTACCAACGCAGTTCCTGTTCGCGCTCATATAGAGTCGTCAGATTACAACCAATT 9280
 E  Y  Q  D  I  V  G  P  C  T  N  A  V  P  V  R  A  H  I  E  S  S  D  Y  N  Q  L
GCTGCACGACATCCAAGACCAGTACCTTCTCAGCTTGCCACACGAAACAATTGGCTTCTCAGATCTCAAGCGCAACTGTA 9360
  L  H  D  I  Q  D  Q  Y  L  L  S  L  P  H  E  T  I  G  F  S  D  L  K  R  N  C
CAGATTGGCCAGAAGCAATCACCAACTTCTCATGCTGCATCACATACCACAATTTCGAGTACCATCCCGAGAGTCAGTTC 9440
T  D  W  P  E  A  I  T  N  F  S  C  C  I  T  Y  H  N  F  E  Y  H  P  E  S  Q  F
GAACAGCAGAGAGTTGAGATGGGTGTATTGACAAAGTTTGTCAACATTGAGATGGATGAGCCACTATATGATTTGGCGAT 9520
 E  Q  Q  R  V  E  M  G  V  L  T  K  F  V  N  I  E  M  D  E  P  L  Y  D  L  A  I
```

Fig. 1H

```
TGCGGGTGAAGTTGAACCAGACGGAGCAGGACTGAAGGTTACTGTTATCGCGAAGACGCAGTTATTTGGTAGGAAGAGAG 9600
 A  G  E  V  E  P  D  G  A  G  L  K  V  T  V  I  A  K  T  Q  L  F  G  R  K  R
TAGAACATCTGTTGGAGGAAGTTTCCAAAACGTTTGAGGGTCTCAACTCTTCTTTGTAACGCACGGGTTGGTCTCAATCG 9680
V  E  H  L  L  E  E  V  S  K  T  F  E  G  L  N  S  S  L  .
TCGCGACAGAACAACCGATGTAGGTTTGTAATTCTTAATGACGTCTTTGACTTTTTGGTTTTTACCATTCGGAGCAAATA 9760
GTAAGCAGAACACTGGCAAATGTCAGATATTACACTTCAGAACTATTATCTTGACTATTATCTCACGTTGTCAGCTTTCA 9840
CATGCTTGCTACGTTCGATCGAGTCAAAAATTGAGATCTACAGGGTAACGCAGGAATCCAGAACAATTGACAAGGATTCA 9920
TCGATCGAACACTATGATTGGTTCGCGTCTCTGACAGGACCATTTGTCCAATAATAGAAGTATAGATAAGATATGCGAGG 10000
AATGCGACAAGGATTGGAACTATCCGAGTCAGCTTGATCTAGTCCCTAAACAGTAAATAGCTCGCGCTTCTTCGGATTCG 10080
CTTTGGTGTATGAATTATCATAGTTTGTTGTGCGAAGAAGAACGATGATGACAGCTTGTATTTTGGATATATATAAGTTC 10160
ATAAAGGTATGACTCTTGATATGATCAAATTAGAAACAATACCTTGACAATATTGTGTTCCAACATTACACAACACTTGA 10240
ACGGGACACTCYTTCAACATCAACACAATGGATCTGTCCAACAAAGCTGCCTACCTTGTCAGTCCCAATGGGCCCACCAT 10320
CGAAGTCAGATCTGCACCTGTTCCAACACCTGGTTCAGGAGAGTTGCTTATCAAGACACATGCTGTCGCCATCAATCCAG 10400
TCGACGGAGTGAAGCAGTCCATGGGTAACATGATGTTTGAATGGCTCAAGTATCCTCTCATCCTTGGCTACGATGTCGCT 10480
GGCGAGGTCATCAAGACGGGACCTGGTGTTAGTCGATTTAAAGAAGGCGATAGAGTTGTGGGTGCTACAGCAGGCATGGA 10560
CAAGCGAGGAAGAAGTCCCGACGAAGGCGCATTTCAAGAAGTTTGCATCATGCGAGAGCATTTGGCTGCTCGAATTCCAG 10640
AGCGTGTTACGTCCACCGATGCCAGCGTTTTGCCTCTGACTTTCGTCACGGCTGCATGTGCCTTGTTCCAAAAGGATCAA 10720
CTGGCACTACAACTACCTCAAACCAAGTCAAAGCGCAGTGCAACAAGTCAGACAGTCTTGGTTTGGGGAGCGAGTACAAG 10800
TGTTGGGAGAAATGCTGTACAGCTTGCTGTCGCGGCCGGCTATGATGTTGTCGCGACAGCATCACCTAAGAACTGGGATA 10880
TCGTACGCGGTCTCGGCGCTTGTGCAGTTTTTGACTATCACAGCTCATCGGCCATAAACGATGTGGTATCTGCTTTCAAG 10960
GACAAGAAATGCGCAGGTGCTGTAGCTATTGGTCAAGGGTCACTGGCGAAATGCGTCGACATTGTCAAAAGCGTTCCGGG 11040
AGCCACCAAGAATGTTGCGCAAGTTACCCTCTCAATGCCTGAGTCACAGCCAACAACCAAGATATCCATGATTCCGTTTG 11120
TCGCAAAGTATTTCTGGATGGCGGGAACTGATCGACTCAAGGTTGCGAGCAGTGGAGTCCAAAGCAAGTTTGTTTTTGGT 11200
ACAGACATAATT                                                                     11212
```

Fig. 1I

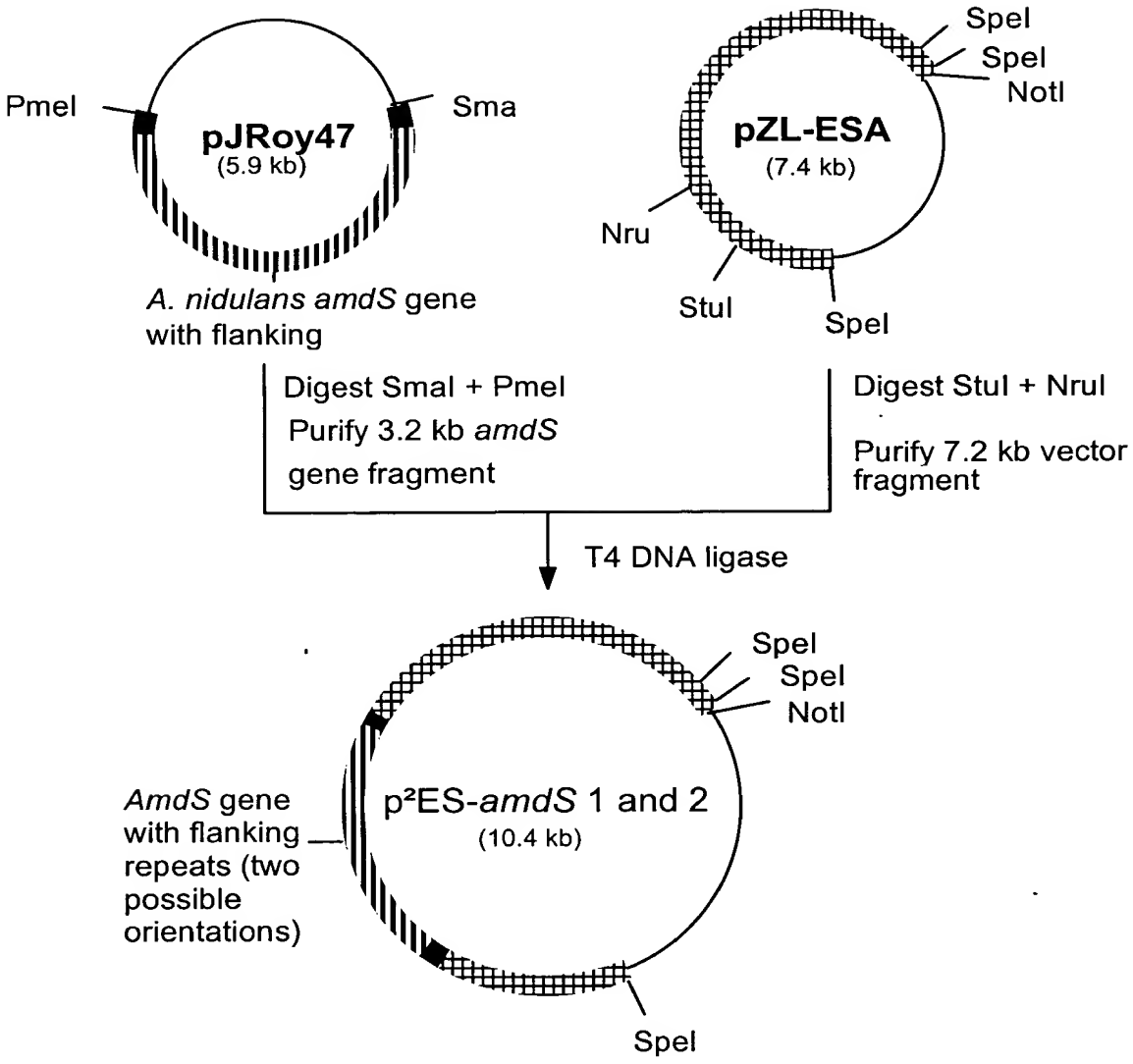

Fig. 2